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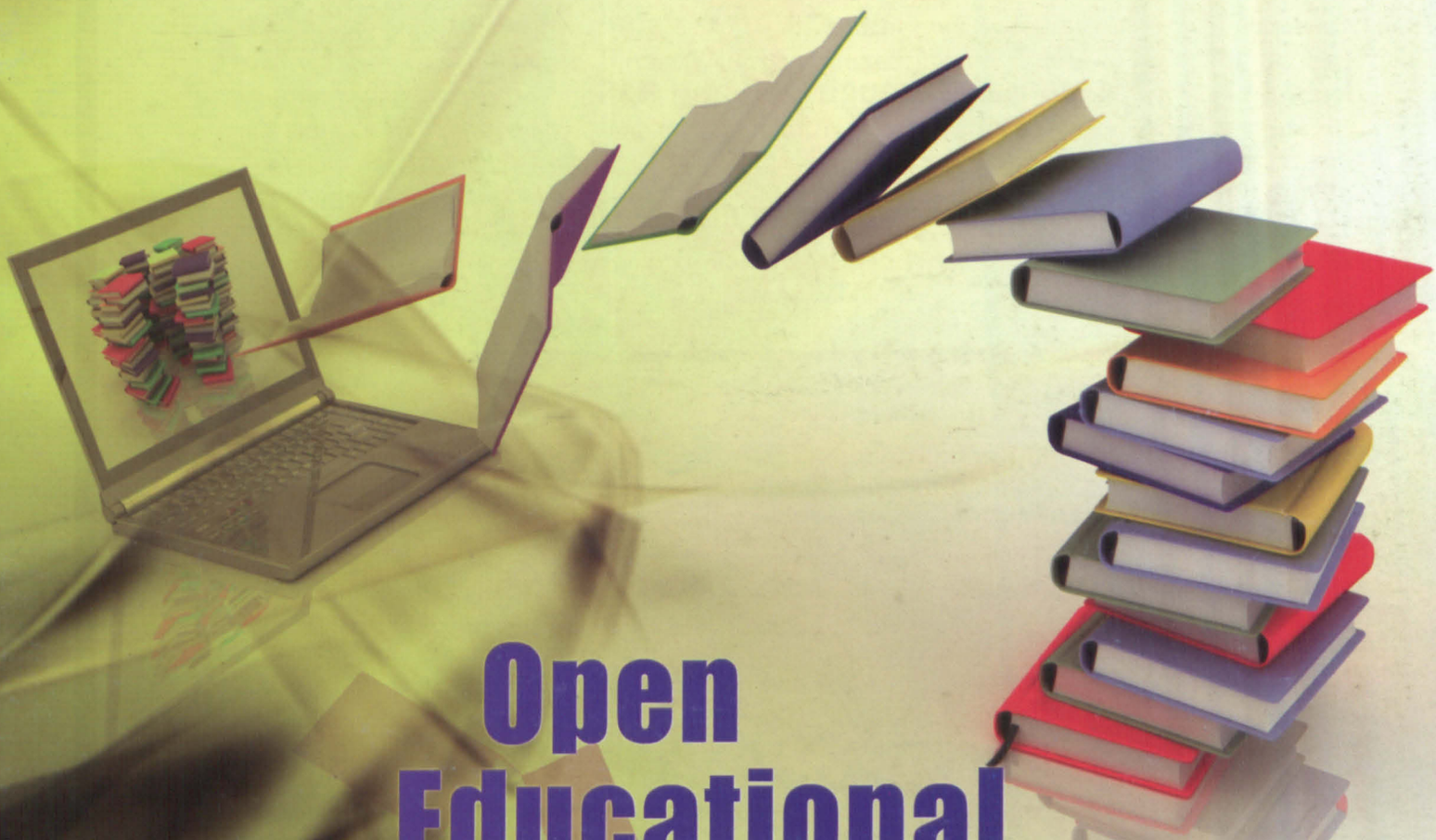

Open Educational Resources

– What, Where and How

Contents

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Everyone is invited to contribute articles, reviews, events and news on teaching-learning issues. All contributions must be submitted to CALM, UNIMAS. You can also reach this bulletin online at: www.calm.unimas.my/insite_v22

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Dean Message

The theme of this issue of INSIGHT is "Open Educational Resources – What, Where and How". Open Educational Resources (OER) is an increasingly popular phenomenon in higher education. OER refers to materials used to support education that may be freely accessed, reused, modified and shared. Two common OERs are Open Courseware (OCW) and Massive Open Online Courses (MOOCs). OCW is a term used to refer to course materials created by universities and shared freely with the world via the Internet. MOOCs are online courses aimed at unlimited participation and open access via the web with traditional course materials such as videos, readings, and problem sets and interactive user forums that help build a community of students and lecturers.

OER brings many opportunities and advantages to all stakeholders of higher education. Yet, the use of OER also presents many challenges. This volume of INSIGHT focuses on getting lecturers to share their experiences with OER based on the literature, research and practical experiences. There are four articles in this volume of INSIGHT. The first article presents some information and sources related to OER, OCW and MOOCs in higher education. The second article relates an instructor's and her students' journey in MOOCs for a postgraduate course. The third article discusses the use of various OERs to achieve active learning. The final article describes the opportunities and challenges in using OER, based on the lecturer's experiences with an elective course.

In closing, I would like to thank all those who have contributed articles to this issue of INSIGHT for their continued support. I hope that these articles spur us to come up with more initiatives in using OER to enhance students' learning experiences in UNIMAS.

The theme for the upcoming issue will be "Meaningful learning for holistic student development in UNIMAS". Pelan Strategik Pengajian Tinggi Negara (PSTPN), encourages approaches to learning that empowers individuals and prepares them to deal with complexity, diversity, and change. These meaningful learning approaches should provide students with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in a specific area of interest to help students develop a sense of social responsibility, strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings. PSTPN listed nine pedagogical practices encompassing seminars and small group meetings of students and faculty, actively involving students in empirical research, final year capstone project, internship programme, collaborative assignment, diverse and global learning, service and community based learning, inter-disciplinary approach to assessment, and writing-intensive course. This issue of INSIGHT invites UNIMAS lecturers to share their experiences and best practices on how they are able to successfully integrate and implement elements of these meaningful learning practices in their courses and work towards developing holistic undergraduates.

Thank You
Prof Dr Gabriel Tonga Noweg
DEAN, CALM

OER, OCW and MOOCs – What do they mean to Higher Education in Malaysia?

Prof Dr Hong Kian Sam
Dr Fitri Suraya Mohamad
Prof Dr Gabriel Tonga Noweg
Centre for Applied Learning and Multimedia

The use of ICT for enhancing education and training has in recent years focuses on the "development and availability of Open Educational Resources (OER)" in education and skills development. OERs are "digital learning resources offered online freely and openly to teachers, educators, students, and independent learners in order to be used, shared, combined, adapted, and expanded in teaching, learning and research" (OECD, 2012, http://dx.doi.org/10.1787/5k990rjhvtlv-en). Furthermore, OER through the provision of open access to course content, have resulted in various initiatives on free online courses, such as OpenCourseWare (OCW) and Massive Open Online Courses (MOOCs). This article hopes to provide an overview of OER, OCW and MOOCs in the context of higher education.

Open Educational Resources (OER)

OER are "teaching, learning, and research resources that reside in the public domain or that have been released under an intellectual property licence that permits their free use and/or re-purposing by others" (http://en.wikipedia.org/wiki/Open_educational_resources), enabling others to re-use, remix, and re-distribute these resources freely. The idea of OER was first initiated at a UNESCO Forum on Open CourseWare in 2002 (http://unesdoc.unesco.org/images/0012/001285/128515e.pdf) and OER was defined as "technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes" (http://www.unesco.org/education/news_en/080702_free_edu_ress.shtml). Thus, OER is based on the "Openness" movement, with the idea that knowledge should be shared and disseminated freely through the Internet for the benefit of the society, the two most important aspects being free availability and as few restrictions as possible on the use of the resource (technical, legal or financial barriers).

The OER initiatives aims to provide free access to high-quality educational resources on a global scale at all levels (primary to tertiary levels and lifelong learning). These resources are educational materials (lectures, textbooks, streaming videos, multimedia applications, podcasts, curriculum outlines, etc.); freely available via open digital repositories (eg., OER Commons http://www.oercommons.org/); and produced by educators for students and teachers/trainers alike, to be used in their teaching and learning activities.

OER offers many benefits to institutions, teachers, and students including:

- Freedom of access;
- Freedom from proprietary systems and corporations;
- Contributes to the local and global community;
- Encourages pedagogical innovation (beyond the textbook);
- Sharing development costs of learning resources among institutions;
- Co-creation empowers more collaboration, creativity, and critical thinking;
- Accessibility of resources previously unavailable to specific group of people;
- Save time and efforts through the re-using and remixing of resources;
- Potentially beneficial to developing nations; and
- Lowers costs to students.

(Wikieducator OER Handbook for Educators, http://wikieducator.org/OER_Handbook)

Nonetheless, there are some issues related to OER as listed below:

- Quality varies;
- Varying degrees of time commitment;
- Teachers sometimes not rewarded by the system for their efforts;
- May not meet accessibility requirements for person with disabilities;
- Need to check accuracy before use;
- May need a high degree of customisation (or localisation);
- Technical requirements vary and some require you to use a particular software;
- Requires varying degrees of continual financial support;
- Licensing and obtaining copyright clearance can be difficult;
- Some institutions may be concerned about 'giving it away'; and

(Wikieducator OER Handbook for Educators, http://wikieducator.org/OER_Handbook).

OER Initiatives

OER Commons (see Fig. 1) was started in 2007 by a non-profit education research institute called Institute for the Study of Knowledge Management in Education (ISKME, http://www.iskme.org/). ISKME is dedicated to innovation in open education content and practices and to aggregate, share, and promote OER to educators, parents, and students. In 2008, ISKME established the OER Commons Teacher Training Initiative to further promote the sharing of OER resources among educators through participatory processes and effective technologies to engage with learning for all.

Curiki (see Fig. 2) is one of the first OER for education. Curriki is a "nonprofit K-12 global community for teachers, students, and parents to create, share, and find free learning resources that enable true personalized learning" (http://www.curriki.org/welcome/about-curriki/). Through implementing the open source process to education, Curriki empowers educational professionals to become an active community in creating good curricula. WikiEducator (see Fig. 3, http://wikieducator.org/Main_Page) was launched in 2006 as an evolving community intended for collaborative planning of education projects linked with the development of free content, development of free content on Wikieducator for e-learning, building open education resources (OERs) on how to create OERs, and networking on funding proposals developed as free content. Its WikiEducator's Learning4Content (see Fig. 4, http://wikieducator.org/Learning4Content) project builds capacity among teachers/educators to develop free content for learning, and prioritize wiki skills (such as MediaWiki and related free software technologies) training for mass-collaboration in the authoring of free content. Another project is the Free Education Initiative (see Fig. 5, http://www.saylor.org/) from the Saylor Foundation which focused on "exploring the promise of the Internet to drive the cost of education to zero and expand access to quality OER". Toward this end, the Free Education Initiative have built over 300 free, self-paced, online courses, which makes use of university and college faculty members and subject experts to provide peer reviews of each course to ensure its quality.

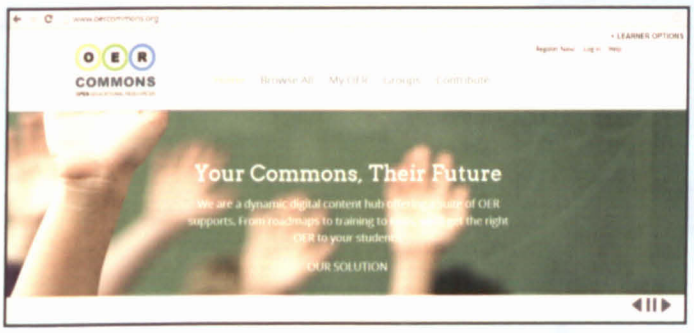

Figure 1: OER Commons

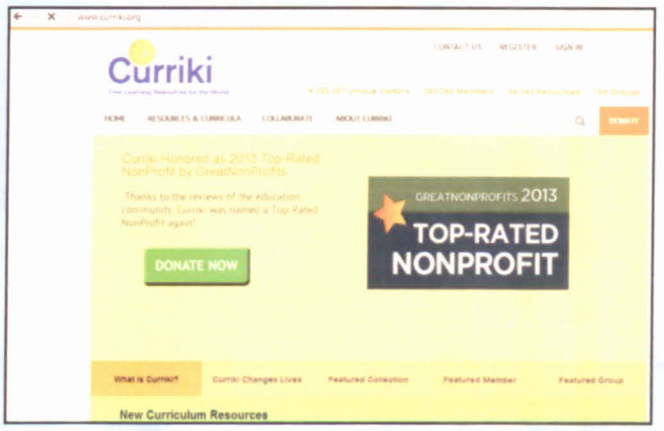

Figure 2: Curriki

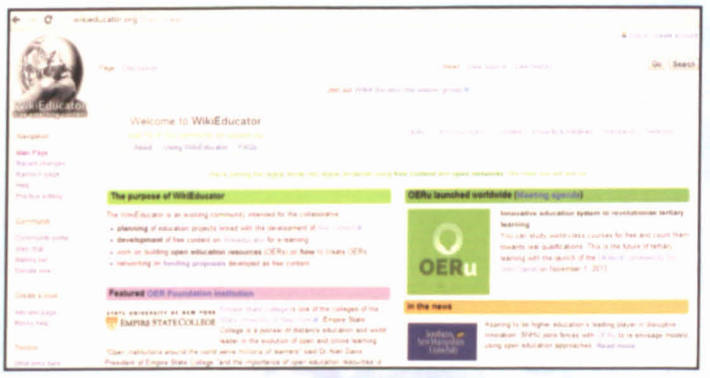

Figure 3: WikiEducator

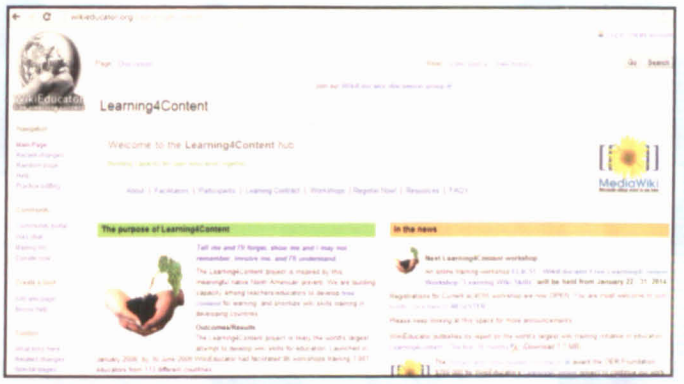

Figure 4: Wikieducator's Learning4Content

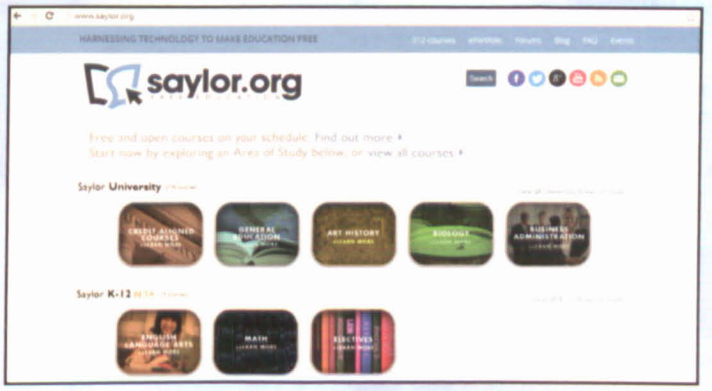

Figure 5: Free Education Initiative

Open Courseware (OCW)

Open CourseWare (OCW) is a "free and open digital publication of university-level educational materials. These materials are organized as courses, and often include course planning materials and evaluation tools as well as thematic content" (OCW Consortium, http://www.ocwconsortium.org/en/aboutus/whatisocw). OCWs are available for use and adaptation under an open license (e.g.,the Creative Commons license http://creativecommons.org/licenses/). OCW does not usually provide certification or access to faculty.

OCW started in 1999 when the University of Tübingen in Germany published videos of lectures online. However, OCW only expanded with the launch of MIT Open CourseWare in 2001 (see Fig. 6, http://ocw.mit.edu/index.htm) and since then a number of universities including Yale, University of Michigan, and University of California, Berkeley, have created OCW projects. The OCW Consortium (see Fig. 7, http://www.ocwconsortium.org/) was established as an independent non-profit organisation to coordinate OCW efforts worldwide in 2008. The OCW Consortium is a community of hundreds of universities and associated organisations worldwide committed to advancing open education and its impact on global educational opportunity. It seeks to advance formal and informal learning through worldwide sharing and use of free, open, high-quality education materials organised as courses. Collectively, OCW Consortium members have published materials for more than 40, 000 courses from 72 providers. Universiti Teknologi Malaysia (UTM) and Universiti Malaya (UM) respectively are already members of the consortium. According to its website, UTM Open CourseWare (see Fig. 8, http://ocw.utm.my/) is a collection of high-quality digital learning material based on courses offered at the university. The learning material, in a complete course format, may include lecture notes, lesson plans, and practice/tutorial questions. UM Open CourseWare (see Fig. 9 https://ocw.um.edu.my/), likewise, is listed as a compilation of high quality multimedia interactive contents and digital learning materials based on courses offered at the university and the learning materials are presented in a complete course format inlcuding lecture notes, video and exercise questions.

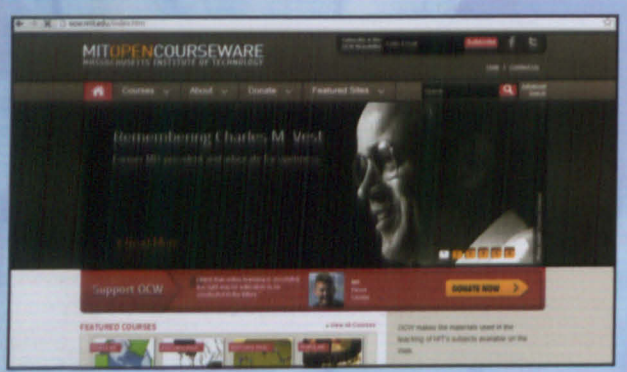

Figure 6: MIT OCW

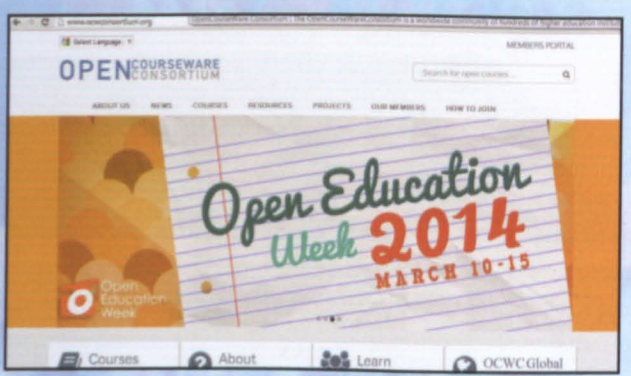

Figure 7: OCW Consortium

Figure 8: UTM OCW

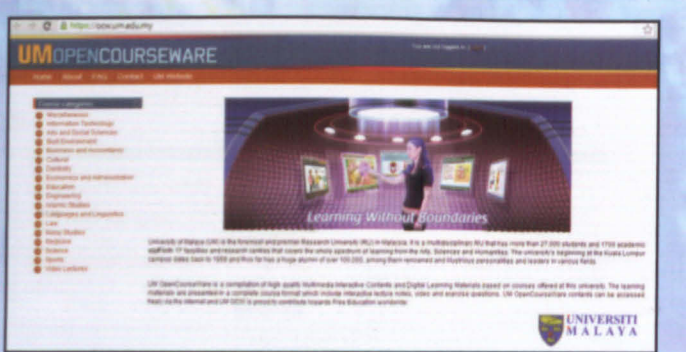

Figure 9: UM OCW

Massive Open Online Courses (MOOCs)

MOOCs are free (or partially free) online courses without formal entry requirement nor participation limit and include interaction, feedback and assessment (via automated quizzes or peers) but do not lead to official credentials/ do not currently earn credits (OECD, 2012, http://dx.doi.org/10.1787/5k990rjhvtlv-en). It started in 2012 when a number of prominent US universities began offering them, e.g, Coursera, developed by Stanford University (see Fig. 10 https://www.coursera.org/); edX, funded by MIT and Harvard University (see Fig. 11, https://www.edx.org/); and Udacity (see Fig. 12, https://www.udacity.com/). These are sometimes referred to as xMOOCs, to differentiate them from an earlier version, the cMOOCs. While in the latter the instructor acts as a coach for participants formulating their own learning outcomes, xMOOCs are content-based, with the lecture as their didactic model. Others differentiate these two terms as "cMOOCs focus on knowledge creation and generation whereas xMOOCs focus on knowledge duplication" (http://www.elearnspace.org/blog/2012/07/25/moocs-are-really-a-platform/).

Most of the MOOC movement is based in the US. However, in recent times, some European universities have joined the US initiatives and a pan-European MOOC platform has been launched (OpenupEd, see Fig. 13, http://www.openuped.eu/). Some national initiatives include FutureLearn (see Fig. 14, https://www.futurelearn.com/) in the UK andOpen2Study (see Fig. 15 https://www.open2study.com/) from Australia's Open University.

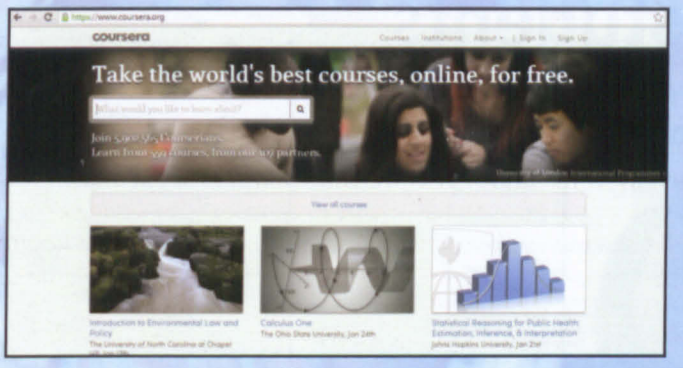

Figure 10: Coursera

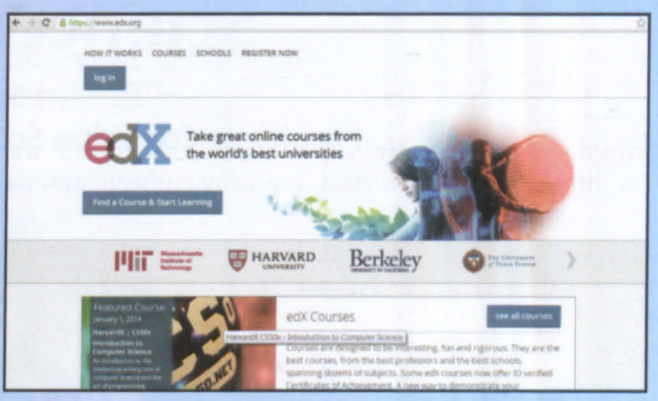

Figure 11: edX

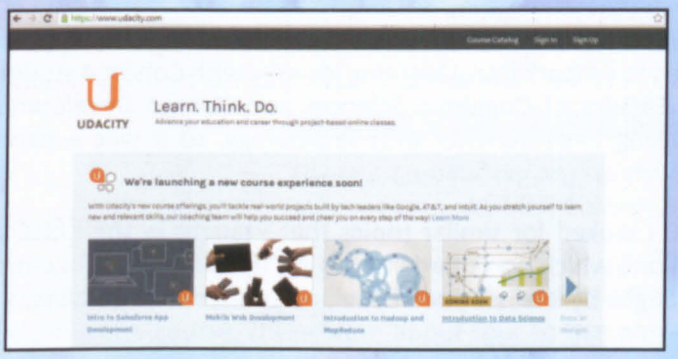

Figure 12: Udacity

Figure 13: OpenupEd

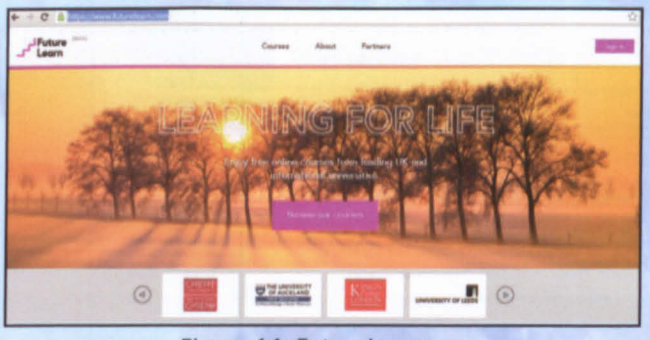

Figure 14: FutureLearn

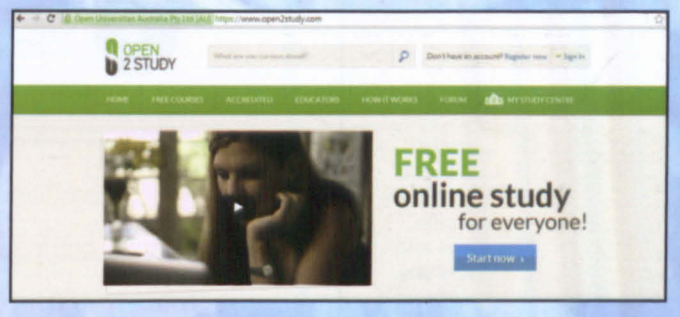

Figure 15: Open2Study

Conclusion

The OER movement has evolved tremendously since it was first initiated at the UNESCO Forum on Open CourseWare in 2002. Today, almost anyone with a web connection is able to attend MOOCs facilitated by top professors from world-class universities through Coursera, edX, Udacity, and others. There are many OCW initiatives and OER related sites to choose from, for educators who want to re-use or remix OER content for their courses. Although some educators may see OER, OCW and MOOCs as a distraction, a "phase", a "trend" which will fade over time, and a means for diluting a degree, many others in higher education view these web-based learning developments as innovations that could mark the turning point in how education, particularly Higher Education, is delivered. Nonetheless, as educators, we should be aware of the possibilities, advantages and pitfalls that OER, OCW and MOOCs, to enable us to continually enhance the quality of our own teaching and learning in Malaysian tertiary institutions.

Learning to relearn and unlearn: Experiencing MOOC with Learning Sciences students

Dr Fitri Suraya Mohamad
Faculty of Cognitive Sciences & Human Development

After reading so much about MOOCs and how much flexibility it offers for those who wish to continually learn without registering officially with any tertiary institution, I had decided to embark into a learning journey with Cohort 4 students from the Masters programme (Learning Sciences) at the Faculty of Cognitive Sciences and Human Development recently. The students are learning about Designing Learning Environments with Technology, so it was a natural decision to involve them in the online learning process.

The selection of the course we registered into was simple. I looked for similar topics that I taught in the KML6073 Design of Learning Environments course, and quickly found one which was titled "Emerging Trends and Technologies for Virtual K-12 Education", offered by Coursera.org, and taught by Melissa Joell Lobel, an academic at University of California Irvine, in the US.

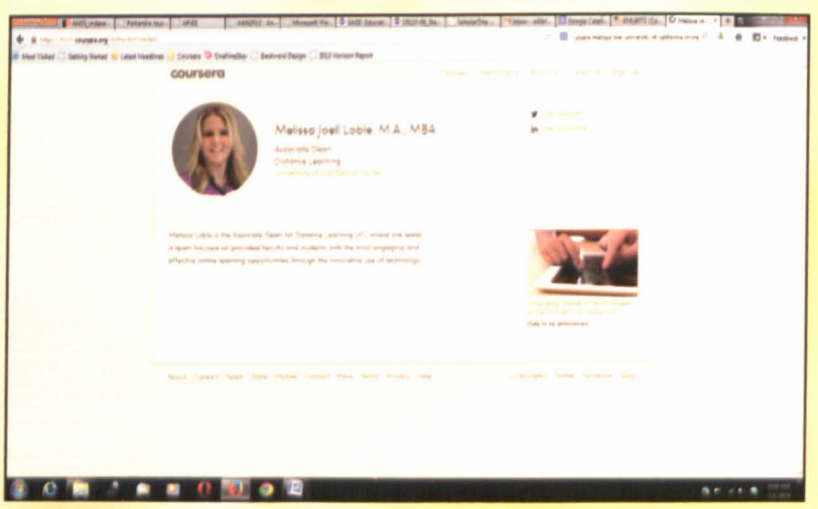

Figure 1: The course instructor's personal page that briefly introduces her qualifications, expertise and contact information.

The online course runs for five weeks, and each week, a series of online lectures are posted to cover the selected topics of the course. All participants are given a series of quizzes as well, as they go through the learning content, and each quiz can be attempted at most five times, to enable participants to learn the content at their own pace and time. There is one major assignment and one final examination compulsory for all participants.

First-timer Expectations of MOOC

Participating in a course where you do not get to meet your classmates can be a daunting experience. In UNIMAS, we use Morpheus to supplement the courses we teach on campus, and none of our courses are 100% fully online. However, in Coursera, all of the courses are fully online. In the case of the Emerging Trends and Technology course,

the instructor, Melissa Loble, aptly created a special introductory video to introduce herself, her expectations for the course, and the key objectives of each module in the course. The five-minute video included some personalised information about the instructor too, for instance, she showed a few of her university's mascots and icons for various concepts that they have at the university. It gave an unusual dimension to her introduction, because at the very beginning, her students are able to see how she personally relate herself and her ideas to her own university, and the values that she holds about the university and learning in general.

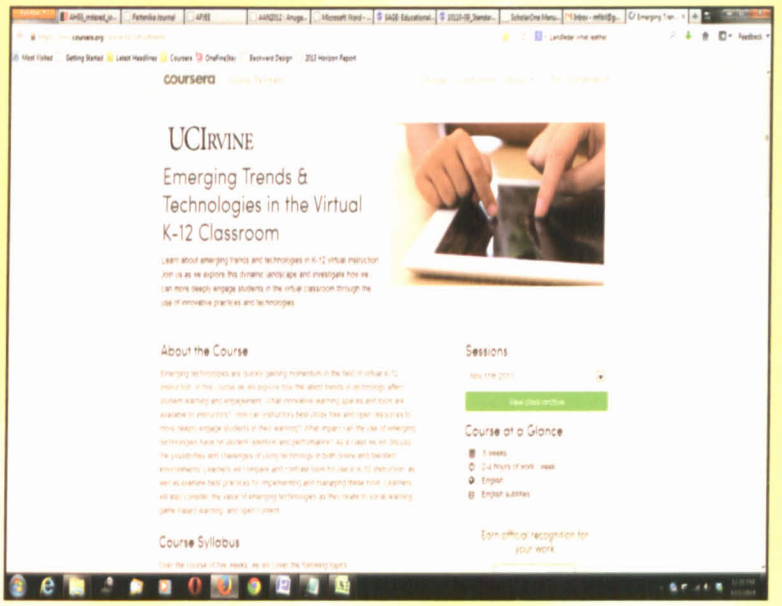

Figure 2: Introductory page to the course website – Emerging Trends and Technologies for K-12 Education

The learning contents were divided equally over the five weeks. Each week a new module is introduced. For each module in the course, there were about four to five narrated slides provided to present the learning content of the course.

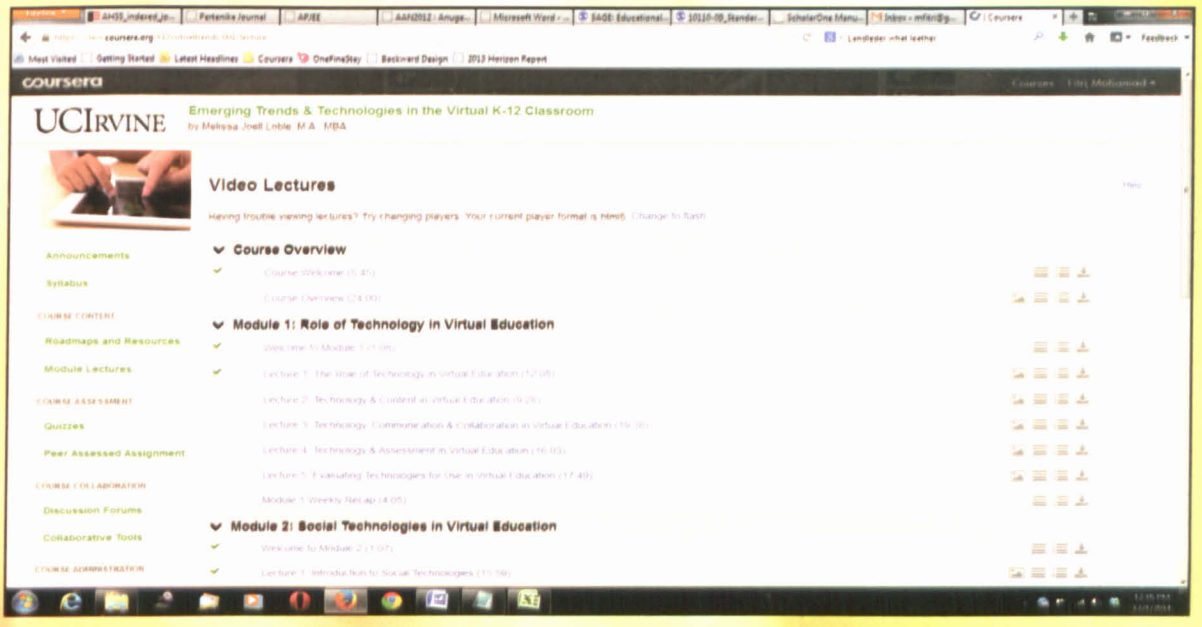

Figure 3: The course syllabus is laid out in a simple user-friendly format, and icons are kept small and predictable, which essentially minimises loss of wasted time to search unnecessarily when learning.

The course learning contents were systematically presented, and each week, new sets of notes and slides were uploaded for the course. At the end of each week, the course instructor prepares a short video to recap what was done in the last module, and it helps participants reflect on key ideas highlighted in each topic. It was also very useful that the course instructor also included comments and reactions that she had picked up from the discussion forums, to relate the usefulness of ideas contributed by participants of the course.

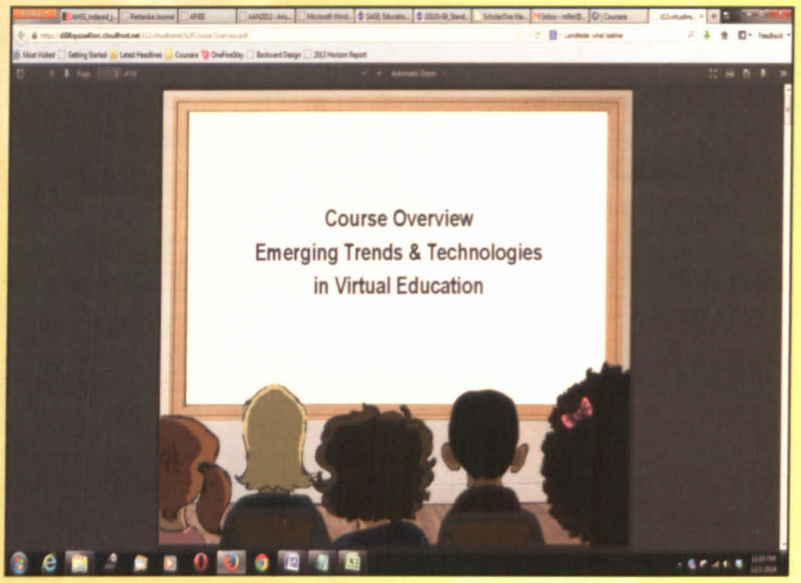

Figure 4: The format for slides to present the learning contents of the course was kept minimal and consistent throughout the course.

Each topic was provided three to four different formats for participants to learn its contents – a narrated video, a pdf version of the notes, a collection of image files from the same slides used for the video, and plain text. The different formats cater for different learning preferences, as some participants may have tendencies to choose one format over the other.

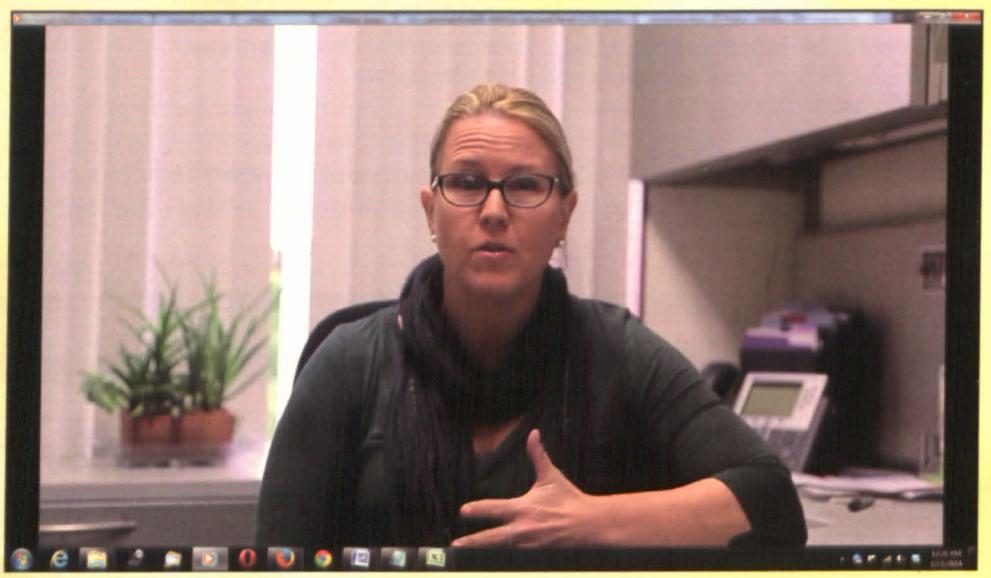

Figure 5: One of the video files in which the course instructor talks through the learning contents presented in each module.

The language used by the course instructor is informal, and she avoids using jargons at the beginning of the course. The video was also shot in her own office, making the general look and feel of the video personalised and authentic. As all participants of the course do not have the opportunity to meet with the course instructor personally, another two options were created in the course to help participants connect with the instructor, and the course, on a friendlier manner. The course instructor scheduled for twitter chats and live Google hangouts as well, to open opportunities for course participants to connect with each other and with her. The communication channels opened new ways of looking at how online learning can still be personalised, although no one in the class meet each other face-to-face in real time.

However, the most significant learning content came through the discussion forums which were set up for each module. The course allows two types of forums – one is moderated by faculty members, and the other is non-moderated, and can be initiated by the students. The most active ones were those in which were moderated by Melissa herself, as participants were eager to engage with her online, as they were not able to physically meet her in a conventional classroom setting. I even joined a forum just for university educators who are curious to learn how to use technology for Higher Education settings. I was also privileged to interact with three British and American teachers who are currently teaching in Malaysia, and had wanted to know if there was any possibility to meet up and discuss the contents we learned in the course.

On the other hand, my Masters students found it daunting to participate in the discussion forums. The pace of messages posted in each forum is quick, and if you are not familiar with educational technology jargons, and readings that were referred to, it may be a intimidating effort to try to read and understand the contents of the discussions. Furthermore, since most of them have limited English communication skills, particularly in writing, they had tended to become silent lurkers in the discussions, most of the time observing, rather than contributing ideas and thoughts to the discussions. One of my students made an impressive effort to drive out from where he was living, where internet connection was almost non-existent, to a semi-urban area about forty minutes from his location, just to read the discussions daily, and to go through the contents of the online course.

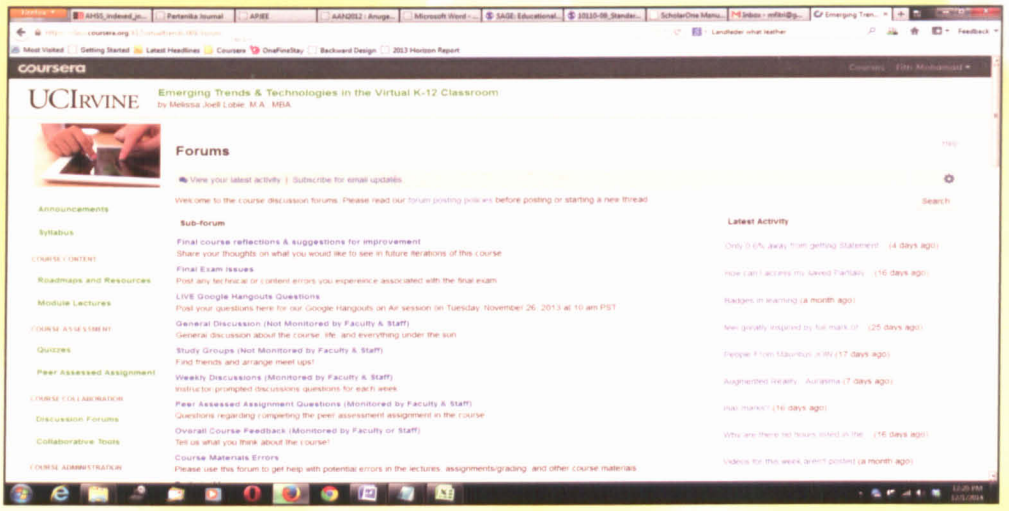

Figure 6: Some of the many discussion forums that were created by both instructor and students throughout the course, and these spaces were useful to build camaraderie between individuals from across the globe.

One of the things that I have found particularly useful is the way assessment was designed for the course. In a conventional face-to-face classroom, an instructor would have been able to explain the criteria of an assignment, and repeat or rephrase any information if students are unclear on any aspect of the assigned task. In an online course such as this, the course instructor has wisely included a sample assignment to refer to, and also a set of clearly detailed rubrics, so participants are able to anticipate the acceptance levels for grade range in the course. There is a discussion forum specifically set up to assist participants in the design and development of individual assignments. It is not clear how many participants actually participated in the online course, but each participant is required to evaluate a minimum of five other assignments, as part of their evaluation for the course. The task automatically puts everyone on the driving seat, because each participant is responsible in analysing and evaluating another five participants in the course.

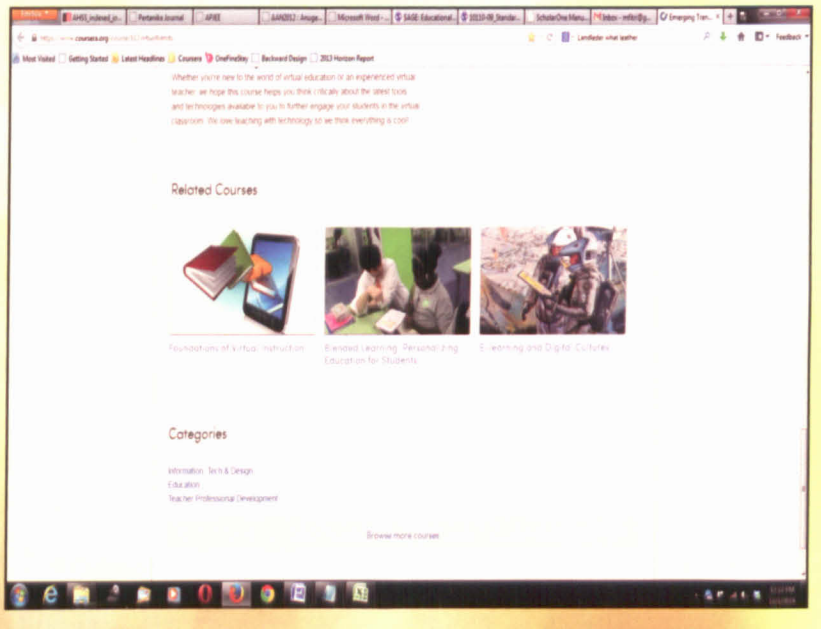

Figure 7: Options provided for participants to market other related and relevant courses offered by Coursera.org, that are similar to the learning contents of the course currently registered

One of the biggest advantages of using MOOCs for a global audience is that it instantly becomes an intellectual marketing tool for the university which offers the course. By the end of the course, all participants are encouraged to take on more courses offered by the University of California Irvine, and a list of possible courses are presented at the end of the course website for further reference. It is a clever way to market the academics of the university, and they are able to provide the learning experience to learn from their experts through the free online platform. The impact is immeasurable, as participants who came together in this course were from almost all continents, and all of them now have the knowledge that the university has expertise in the field offered through Coursera.org.

In conclusion, the MOOC experience was an eye opener for my students and myself. Although there was no face-to-face element in the course, we spent a significant amount of time daily to go through the contents, participate in the discussions, and complete the assigned tasks. In retrospect, the MOOC experience did provide a platform to read and understand that the educational technology challenges in Malaysia are similar to many countries around the world, and even in developed nations.

It is clear that the challenge for higher education is no longer about the size of the campus, or the number of professors on campus, but rather the accessibility to knowledge that is provided by the institutions of higher learning. Traditionally university education is available only to a select few, but with the advent of technology, as access of web-based technologies become increasingly prevalent and affordable, university education is open to public, 24/7 and on any device connected to the web.

Active learning through OER and OSS

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Nowadays, it is not unusual to hear university lecturers discussing Open Educational Resources (OER) and Open Source Software (OSS) as if they have always been part of the picture. Much of these discussion can be related to developments in technology, internet availability, web 2 tools and individual communities willingness to share their best practices. These developments have also made it possible for educators, psychologists and to address learning issues once considered desirable but unlikely only thirty years ago (Bachman, 2000). Indeed educators today are definitely living in better times. They are fortunate in that they can receive, share and transmit up to date knowledge and make positive real time changes to their teaching and learning all in the name of Open Educational Resources (OER) and Open Source Software (OSS). This paper is an insight into the various opportunities made available through OER.

OSS and OER as Opportunities for Learning

Presently, OER and OSS resources are options for helping policy makers and academicians at higher educational institutions grapple between scarce financial resources and maintain quality teaching and learning. Incidentally, the term OER was coined by UNESCO (2002) with reference to web based educational content that can be used, distributed and modified without fear of infringements of copyright laws. Universities in particular have forged an alliance to OER alliances in terms of creation, sharing and reusability (Geser, 2007). A noted value of OER being that, in addition to promoting digital competence these resources can challenge, promote critical thinking and creativity among learners. The wide opportunities can be seen as useful for innovating curricula at higher learning institutions. They also help leverage the educational quality of content of smaller universities through quality control, feedback and improvement based on sound networking systems. An added bonus being that they foster lifelong learning and social inclusion through easy access to resources which may otherwise not be accessible to many. Thus what matters at the receiving end nowadays, is for the instructor to be clever, motivated and ready to take on a small degree of instructional risks that will enable learners to discover learning as engaging and fun.

OER as Learning Opportunities

Directory of Resources: Presently, universities worldwide have been credited for producing and disseminating many OER resources. This should not come as a surprise as many of these tools are tiny steps in what should be seen as an industry that is bent on reaching out to one another to democratize education. While it is not clear which tool and technology will continue to remain long, the academic community continues to make it a point to keep one another informed of what is around, where it can be obtained and how it can be used. Jae Bae Soon (2011) list of useful OSS tools with their links according to categories http://www.apacall.org/member/sonjb/projects/tools/ is an indispensable site for many practitioners (Refer Fig. 1).

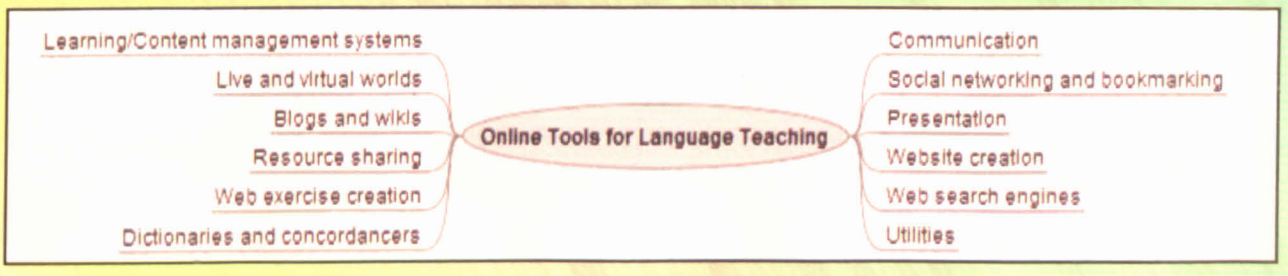

Figure 1: OER according to Categories

In terms of tested tools for the Malaysian classroom, Amin Embi's e-book collections on Scribed and at http://www.scoop.it/t/web-2-0-learning-teaching is a worthwhile experience. For the adventurous in us, http://www.go2web20.net/ appears to always have something new to share. Many of these tools though not necessarily without some risk to its accuracy and reliability, can be easily adopted, used in various ways to transform a bullet ridden killer presentation to an enchanting world of color, 3D animation, interactiveness and creativity.

What, Why and How of some OER tools in Class

It is often said that knowledge cannot be seen as having taken place until students transfer their learning experience to new knowledge. Presently, WEB 2.0 resources are able to engage young learners and motivate them to modify and recreate knowledge creatively. The rationale for using OER resources in UNIMAS can be fairly straightforward as indicated in i-iv. They ...

i. offer a wide range of subjects and topics that can be easily linked to the interdisciplinary needs of learners (e.g. *Khan Academy*, *Gooru* and *Edu Creation*),

ii. allow content to be easily modified and integrated into an e- course (e.g. *Phostoscape, LCDS, PicPic, Format Factory, Edu Creation*),

iii. enable learners to demonstrate creativity and critical thinking skills (Goanimate, Vimeo), and

iv. provide easy-to-use tools to set up collaborative learning environments and publish (e.g. *Wikis, blogs, flipsnack, social networking site, content feeds,* etc.).

It is therefore within each instructor to integrate a number of the tools and put up an interactive online lesson in a matter of minutes. The following are some sneak previews into ways to engage learners with OER.

Increasing SLT

University lecturers are often required to think of ways to help increase student's learning time. OER are ideal in this matter since they add variety and challenges the learner to work with both language and content simultaneously. Two sites that I have found particularly useful for getting learners to work on topics inside and outside the classroom are Blendspace and Mural.ly. The former is an engaging self- learning tool which allows instructors to pull together endless OER and OSS resources such as word documents, videos and quizzes from a host of OER resources like *Khan Academy, Gooru* and *Edu Creation.* The instructor merely has to pull together a number of web tools (an activity that can take less than 20 minutes to create) (Refer Fig. 2). Students can then be directed to complete the task on their own after class. An added feature of this resource being that it allows the instructor to track student' performance according to individual group and learner performance. It can also trace the time spend on each activity to enable instructors to assess what is seen as meaningful by learners. It is also possible for the instructor to include a quiz element to assess learner performance from time to time as in Fig. 3. What is ideal for the teacher is that the teacher has evidence for the actual student learning time and instructors can hear from each student for each activity without worrying about time.

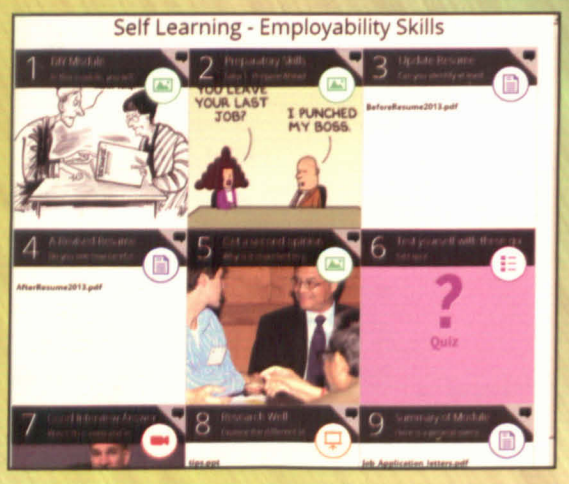

Fig 2a : An online lesson via Blendspace

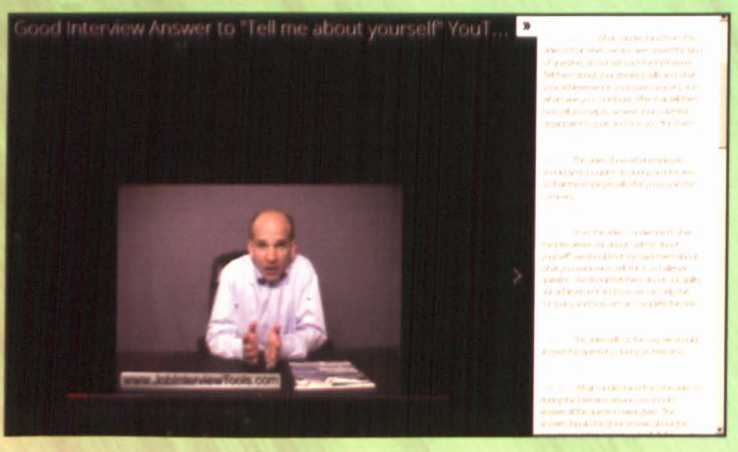

Fig. 2b: Students comments after watching a video

Fig. 3 : Total time spent on activity

To get learners to participate in the discussion, students need to complete the various activities as in Fig. 2b. This indirectly helps provide a platform for all learners to have their voices heard. These comments remain useful because it helps instructors identify the level of learning that is taking place.

Learning is said to happen when students are able to reuse what they have learned in class in novel ways. In terms of getting students to reuse and demonstrate learning effectiveness, discussion boards such as ***Mural.ly*** are ideal. Used as a virtual whiteboard, it is possible to invite a number of groups and brainstorm, ideas for projects and create a seamless tapestry of content and links as indicated in Fig. 4. Easily created in class, the instructor merely needs to post a series of open ended questions on the board and invite students to join as collaborators. Given some time, students will work on their own by posting ideas, links, pictures to start up a basic framework for the project on their own. Instructors can track student's engagement as the project takes shape. Generally, students can be made to brainstorm on a specific idea and put up useful evidence for a writing project in and outside class. The instructor can come in from time to time to provide insights or comment on selected efforts. Indirectly, this helps transfer some level of ownership of learning content to the learner and adds pride to those who have helped in the knowledge acquisition process.

Fig. 4 : Students work on Mural.ly.

Using GoAnimate for Producing Creative Learners

Most university lectures contain elements of some lecture with powerpoints being used to emphasize and augment particular topics. Occasionally, some *You tube* links or other technology tools gets included to supplement the theme. While auditory learners respond well to these lecture modes, students who favor other modes of learning styles will benefit when students are given additional opportunities to source for their own information and create their own knowledge to be used in class. This is where, the real fun begins. Putting students into small groups and getting them to create short dialogue or cartoon clips through tools like *goanimate* as reinforcement of a teaching point encapsulates the learning process in more ways than imagined possible (Refer Fig. 5)

Fig. 5. Student's work

Encouraging students to create simple dialogues or scenarios without having to learn the intricate set up of animation and merely concentrate on coming up with the content seems to motivate even the weakest learner in the class. To ensure that learning is taking place, I often comment on the accuracy and appropriacy of the conversation/dialogue before it gets published and later have them listed under *pinterest*. These are merely some options for using OER and the list remains. What is important is that it adds much needed colour, variety and interest that I rarely see in my traditional classroom. Sometime, students are encouraged to evaluate their peers efforts. These activities further reinforces the perception that visual learners continue to be aided by seeing the examples themselves, while tactile learners volunteer to write out the sentences and rephrase them on their own.

Conclusion

At this juncture, it can be said that the benefits of OER and OSS are endless. It is up to the instructor to inject more creativity and fun into the learning process. In sum, it can be said that when students rewrite and work on collaborative activities, knowledge is bound to be shared. The availability of OER and OSS resources makes it easy for instructors to use professional teaching tools to get large groups of learners to work together in and outside the class. I know that OER and OSS provide opportunities for students to engage, have fun and when there is fun, there is a good chance that their enthusiasm for the work would rub on to their peers as well. To add to the experience, when students get to publish their works online for all to see, there is an added level of satisfaction for both instructor and learner. Beyond the clear benefits of this active learning process, it is simply a novel learning experience that tells me that my learners are learning more through OER resources than all the text books and pdf documents that I have force them to read up throughout the years.

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Utilizing OER in a university elective course: Opportunities and challenges

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Open educational resources (OER) are learning platforms that have the potential to bridge the knowledge gap. OERs are ubiquitous and available 24/7 but the use and reuse of these platforms are generally still at infancy. A recent survey among academics in Malaysia on the Malaysian Higher Education landscape with respect to digital resources and OER showed that 70 % of respondents have utilized OER in their teaching, 13 % had not used OER and 17 % were unsure whether they had used OER (Abeywardena et al., 2013). OER in Universiti Malaysia Sarawak (UNIMAS) has cemented its roots (Hong et al., 2013) with the help of individuals and faculties/institutes/centres initiatives. There are many opportunities and limitations for the adoption of OER in structured curricula. In this experience sharing article, the author describes how OER was used in a university elective course and the challenges faced were addressed.

MEC1023 Introduction to Medical Genetics - is a university elective course offered to all students in UNIMAS. The course was introduced in 2008 and the prerequisite is pre-university level knowledge in biology and general chemistry. This course discusses the basic and fundamental aspects of molecular biology and genetics. It begins with a review of what is now referred to as the central dogma of molecular biology and moves on to apply knowledge of molecular genetics in the medical field. The course also discusses some applications of this knowledge in our everyday life. Towards the end of the course, pertinent aspects of some common medical problems encountered by the society are highlighted.

In MEC1023, the understanding of the central dogma of molecular biology is essential and in order to stay focused on the determined syllabus, certain knowledge pertaining to the basic concepts are not reviewed in detail. Moreover, this knowledge comes under the prerequisite for the course. Since the enrollment of students for this course encompasses students from Faculty of Economics and Business, Faculty of Social Sciences, Faculty of Engineering, Faculty of Applied Arts and Creative, Faculty of Cognitive Science & Human Development, Faculty of Computer Science & Information Technology, Faculty of Resource Science & Technology, and Faculty of Medicine & Health Sciences, a good foundation of prerequisite knowledge among students' are not always assured. In order to provide this essential part of the course, the students are encouraged to do self directed learning (SDL) on the topics that are not formally taught during the face to face sessions. For this purpose the instructor used OER.

In particular there are two fundamental aspects which are important prerequisites for MEC1023. They are general cell biology and mitosis and meiosis. For each one of these topics the instructor identified an OER and made it available for the students through UNIMAS online learning system. For general cell biology, the students could look up http://learn.genetics.utah.edu/content/begin/cells/, whereas for the topic on mitosis and meiosis, the students were encouraged to visit http://www2.le.ac.uk/projects/oer/oers/genetics/genetics-oers. These relevant OERs' url were also given during face to face teaching sessions.

OER comes in many designs - mainly static, multimedia rich and interactive modes. Students who are able to download a pdf file would experience an example of accessing a static OER. Static OERs at times are enriched by embedding offline task completions. Multimedia rich OERs are websites that enable student to experience high quality audio visual information. Currently, high definition audio videos are extensively available on the net. These multimedia OERs include self-assessment exercises, which provide opportunities for students to play an active role in the process of learning. Finally, the interactive OERs make learning more meaningful by allowing users to dictate their learning

pace. The general cell biology OER is an interactive OER, meanwhile the mitosis and meiosis OER is a static OER. The instructor created some activities in the form of self-assessment exercises and also a YouTube resource (http://www.youtube.com/watch?v=zGVBAHAsjJM) to supplement the static OER.

Since MEC1023 is an elective course and students from diverse background enroll for this course, the instructor has learnt over the years that giving students the OER alone does not ensure students' acquisition of the prerequisite knowledge for this course. Some of the factors that hindered students from fully use and reuse the OERs were :

1. OER is too lengthy and mixed with other contents,
2. Motivation to use the readily available SDL resources was low,
3. Technical difficulties encountered during the engagement with OERs, and
4. In availability of own personal computers (PC).

The instructor discovered that asking students to visit certain OER on their own without any briefing or supervision is a perfect recipe to demotivate students. The instructor must look for suitable and relevant OERs and engage them first before carefully selecting appropriate OER for students' use. If there are any inadequacies in the OER, then the instructor should supplement additional resources. The relevance of the OER must be ensured at all times. This would ensure that the students are motivated and learning goals are achieved.

In MEC1023, students' motivation to use and reuse OER was maintained by engaging self-assessment exercises that were graded and the marks obtained were included as a part of the summative assessment for the course.

Numerous technical difficulties were also encountered by students while accessing OERs. These difficulties include tasks as simple as typing the incorrect url, software incompatibility with user's PCs and weak or unreliable wi-fi connection. The instructor found that long url with no meaning is a distractor for students. Therefore, shorter and meaningful urls were created using short-url-generator at http://tiny.cc/. This helps the students to get an idea of the topic covered by the OER and stay focused. For example, the students were to visit webpages pertaining to mitosis and meiosis, therefore they had to surf to this url http://www2.le.ac.uk/projects/oer/oers/genetics/genetics-oers. However, this url only shows the general topic i.e genetics and does not indicate any relevance to mitosis and meiosis. Thus, to make the url more meaningful, the instructor pasted the url into a short-url-generator at http://tiny.cc/, and a more meaningful url (http://tiny.cc/mitosis-meiosis) was generated. This was then given to students to access.

In order to address some of the technical problems encountered, the students were often reminded about the importance of keeping their computer updated to avoid incompatibility issues while engaging the recommended OERs. Installing flash software and acrobat reader are some of the required softwares to engage OER.

However, weak or unreliable wi-fi connection is a genuine challenge faced by many students. At times problems such as this is outside of the instructor's capacity to provide a solution. It is indeed a crucial facility that needs the university's attention. Similarly, lack of own personal computer can only be addressed by utilizing publicly available computers in the faculty computer labs.

Although OER offers great opportunities in teaching and learning, the use and reuse of OER requires facilitation. OER enriches the students' experience in a course. It provides an exciting learning style for the current generation of students. OER enables ubiquitous learning to take place and empowers learners to set their own learning pace. In summary, OER needs to be adopted and adapted to ensure relevant, meaningful and efficient learning process.

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INSIGHT THEMES for 2014

1. Meaningful learning for holistic student development in UNIMAS

Pelan Strategik Pengajian Tinggi Negara (PSTPN), encourages approaches to learning that empowers individuals and prepares them to deal with complexity, diversity, and change. These meaningful learning approaches should provide students with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in a specific area of interest to help students develop a sense of social responsibility, strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings. PSTPN listed nine pedagogical practices encompassing seminars and small group meetings of students and faculty, actively involving students in empirical research, final year capstone project, internship programme, collaborative assignment, diverse and global learning, service and community based learning, inter-disciplinary approach to assessment, and writing-intensive course. This issue of INSIGHT invites UNIMAS lecturers to share their experiences and best practices on how they are able to successfully integrate and implement elements of these meaningful learning practices in their courses and work towards developing holistic undergraduates.

2. Scholarship of teaching and learning: Challenges for academics

The scholarship of teaching and learning (SoTL) was part of a pioneering sector-wide initiative for improving teaching and learning in the Malaysian higher education teaching and learning environment. SOTL is scholarly inquiry into student learning which advances the practice of teaching by making research findings public. SOTL necessarily builds on many past traditions in higher education, including classroom and program assessment, action research, the reflective practice movement, peer review of teaching, traditional educational research, and faculty development efforts to enhance teaching and learning. SOTL research encompasses aspects of professional development or faculty development, such as how teachers can not only improve their expertise in their fields, but also develop their pedagogical expertise, including how to better teach novice students in the field or enable their learning. It also encompasses the study and implementation of more modern teaching methods, such as active learning, cooperative learning, problem-based learning, and others. SOTL researchers come from various backgrounds, such as those in educational psychology and other education related fields, as well as specialists in various disciplines who are interested in improving teaching and learning in their respective fields. In Malaysia, AKEPT has carried several workshops on SoTL for academics. However, an initial qualitative study by Harland, Raja Maznah Raja Hussain and Aishah Abu Bakar (2014) showed that there had been no true learning phase for SoTL because academics had high expectations of rapid success in their new research area, including journal publication. Most of their peers did not understand or value SoTL and so SoTL researchers established minority self-sustaining groups across disciplines and universities. SoTL brought new ways of thinking about teaching that were transformational for the teacher but not necessarily welcomed by the students. Students resisted radical change, and teachers were drawn back to educational practices they no longer valued. SoTL was experienced in a hierarchical educational culture where questioning of self and others was difficult and this hindered teacher development. In this volume of INSIGHT we would like to invite lecturers in UNIMAS to share their experiences with SoLT and how it affects their teaching and learning, research and professional development.

Harland, T, Raja Maznah Raja Husain, & Aishah Abu Bakar (2014). The scholarship of teaching and learning: challenges for Malaysian academics. *Teaching in Higher Education, 19*(1), 38-48.

3. Challenging and supporting first-year university students

Many of us have experienced the challenges and frustrations of first-year instruction. Courses are designed to emphasize problem solving and the application of basic principles to real world situations, moving away from memorized facts and routine calculations. However, first-year students come to university with their own notions of what constitutes learning. However, for the most part, they are in the early stages of intellectual development, and many students define learning as accumulating facts and memorizing right answers. Likewise, they've honed their study skills to do just that. Although accumulating facts is something we do want students to do, it is certainly not the only thing they should accomplish in our courses. We want students to use the ideas of our disciplines to solve problems, to analyse situations, to make judgments, and more. Therefore, when our courses demand that first-year students move beyond memory, as they should, we need to provide structured activities to support them in uncharted territory. This issue of INSIGHT invites lecturers to share their experiences and best practices on how they are able to challenge and support their first-year students to move beyond memorization into the realm of problem solving, collaborative learning, creative thinking and higher order thinking.

4. Social media: Meeting your students where they are

Online social networking has become an integral space for many of our students to live out their daily personal interactions. A large percentage of our students are using social media from the moment they wake up with often-misguided fears and feeling the need to keep personal and professional relationships separate, many faculty and administrators tend to steer clear of online social space. But this is as important a space to engage students as is the lecture room, tutorial room, or laboratory. Social media such as Twitter represents a ubiquitous, cost-effective, and engaging way to enhance student-student, student-faculty, and student-content engagement outside of class. This issue of INSIGHT invites lecturers to share their experiences and best practices on using social media to successfully engage and interact with their students in enhancing the quality of teaching in UNIMAS.

Events at CALM

Module 7 CLM5074 Assessment of Learning, 6-14 Feb 2014

Morpheus Online Learning Training,

Centre for Applied Learning and Multimedia
Universiti Malaysia Sarawak